

TEACHER PLANNING FOR A SAFER LAB

There are numerous mechanisms that can be put in place by individual teachers and science departments that may help ensure both a safe and worry-free teaching environment in the science labs.

PRIOR TO ANY LABORATORY ACTIVITY

Plan: “... take the time to consider what the best strategies are to ensure your students can learn effectively and safely.
.... write out your plans, not just so others can read them, but so you can review and critique them yourself before you begin the lesson and remember what you've done later.”

These plans would include (and this could be expanded):

1. checking your facilities for the presence of, and accessibility to, correctly operating safety equipment and protective devices.
2. counting the protective devices you have, such as safety goggles, gloves, or aprons to ensure that you have enough, in good condition, for everyone who needs them.
3. refreshing (teaching) student awareness of proper safe lab techniques related to the experimental procedure they will be following (do not “trust” the text to say it all).
4. determining the location of specific safety items that the students should be aware of prior to their performing the experiment.
5. assessing what safety precautions need to be emphasized prior to the experiment (these would include reviewing the procedure with respect to any assumed or inferred safety issues along with an assessment of chemical reactant and product hazards).
6. assessing how equipment and materials are to be distributed in order to avoid congestion and reduce potential discipline problems
7. determining proper disposal techniques, outlining these for the students and setting up the necessary containers.
8. deciding whether sufficient time has been allowed for completion of the task **and** subsequent lab clean-up.
9. reviewing all MSDS information related to the hazards associated with the chemicals used and the products formed.
10. determining the minimum quantities of chemicals necessary to bring into the classroom

This may seem like a formidable task, all for one little experiment, but once it is completed it will serve you well into the future. Subsequent planned experimentation may require a simple review or revision of these planning items, depending on your assessment of their effectiveness after completion of the first trial.